

REMARKS

Claims 1-21 are pending in the application, of which claims 1, 3-5, 7-11, 13-15, 17 and 21 have been amended in order to more particularly point out, and distinctly claim the subject matter to which the applicants regard as their invention. The applicants respectfully submit that no new matter has been added. It is believed that this Amendment is fully responsive to the Office Action dated **July 1, 2005**.

Claim Rejection under 35 USC §102

Claims 1, 2, 4, 11-12, 14 and 21 stand rejected under 35 U.S.C. 102(b) as being anticipated by JP 2500761.

The present invention is a speech recognition device. There are a total of four embodiments described in the specification for this speech recognition device. In this speech recognition device is included as shown in Figure 1 a microphone connected to an A/D converter (2). The A/D converter (2) is connected to both a signal delay unit (3) and a sound level estimator (4). The sound level estimator (4) calculates a sound level estimation value based on the applied digital sound signal. The signal delay unit (3) applies the digital sound signal delayed by a predetermined sound level rising time period to a sound level adjuster (5). The sound level adjuster (5) adjusts the sound level of the digital sound signal based on the sound level estimation value. The adjusted sound level output is sent to the speech recognition unit (6) where speech recognition is performed.

JP 2500761 describes a speech recognition device in which amplification is set to a constant level so that gain of the amplification means is rendered large for small voices and rendered small for large voices. As described in paragraphs 7 and 17 the result of voice recognition does not vary with distance or volume of the voice and voice recognition is greatly improved.

JP 2500761 fails to describe a a sound detector, a sound level estimator, a hold circuit and a storing circuit. Therefore, claims 1, 11 and 21 have been amended to include these features. Therefore, claims 1, 11 and 21 patentably distinguish over the prior art relied upon by reciting, as exemplified by claim 1,

“A speech recognition device, comprising: an input unit that inputs a digital sound signal; a sound detector that detects the starting point of the digital sound signal in a sound period input by said input unit; a sound level estimator that estimates the sound level of said sound period based on the digital sound signal in a prescribed time period at the beginning of said sound period input by said input unit; a sound level adjuster that adjusts the level of the digital sound signal in said sound period input by said input unit based on the sound level estimated by said sound level estimator and a preset target level; a speech recognition unit that performs speech recognition based on the digital sound signal adjusted by said sound level adjuster; a hold circuit that holds the sound level estimator by said sound level estimator; and a storing circuit that stores the digital sound signal in said sound period input by said input unit in response to the detection by said sound detector and outputs the stored digital sound signal in said sound period to said sound level adjuster in synchronization with the sound level held in said hold circuit.” (Emphasis Added)

Therefore, withdrawal of the rejection of claims 1, 2, 4, 11-12, 14 and 21 under 35 U.S.C. 102(b) as being anticipated by JP 2500761 is respectfully requested.

Claim Rejection under 35 USC §103

Claims 3, 10, 13 and 20 stand rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2500761 in view of JP 126093 (Okamoto).

JP 126093 (Okamoto) describes a voice adjusting method in which a level decision part (42) decides whether the measured sound level resides within a prescribed range and outputs an input gain control signal to control the input voice so that it lies within the prescribed range.

Claims 3, 10, 13 and 20 are allowable by virtue of their dependence from allowable independent claims. Therefore, withdrawal of the rejection of claims 3, 10, 13 and 20 under 35 U.S.C. 103(a) as being unpatentable over JP 2500761 in view of JP 126093 (Okamoto) is respectfully requested.

Claims 5-7 and 15-17 stand rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2500761 in view of JP 60-16200.

JP 60-16200 describes a voice recognition system in which a delay circuit (13) delays a voice input signal.

Claims 5-7 and 15-17 are allowable by virtue of their dependence from allowable independent claims. Therefore, withdrawal of the rejection of claims 5-7 and 15-17 under 35 U.S.C. 103(a) as being unpatentable over JP 2500761 in view of JP 60-16200 is respectfully requested.

U.S. Patent Application Serial No. **10/069,530**
Reply to OA dated July 1, 2005

Claims 8-9 and 18-19 stand rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2500761 in view of JP2975808 (Koichi).

JP2975808 (Koichi) describes a voice recognition device in which when voice recognition fails circuit (2C) is switched to increase the gain on the variable gain amplifier (2B).

Claims 8-9 and 18-19 are allowable by virtue of their dependence from allowable independent claims. Therefore, withdrawal of the rejection of claims 8-9 and 18-19 under 35 U.S.C. 103(a) as being unpatentable over JP 2500761 in view of JP2975808 (Koichi) is respectfully requested.

Conclusion

In view of the aforementioned amendments and accompanying remarks, the claims, as amended, are believed to be patentable and in condition for allowance, which action, at an early date, is requested.


If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact the applicants' undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

U.S. Patent Application Serial No. 10/069,530
Reply to OA dated July 1, 2005

In the event that this paper is not timely filed, the applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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